



Preventing Stockouts With Improved Forecasting

Having the ability to more accurately forecast demand allows for greater visibility, faster problem-solving, and happier customers.

There are a lot of moving parts within a Service Supply Chain.

With all the parts, people, locations, and different operations taking place behind the scenes, stockouts are bound to happen.





See ahead.



Stay ahead.

Unfortunately, stockouts can wreak havoc on an organization, especially when a service contract has a time-sensitive SLA (Service Level Agreement). By taking certain measures, you can significantly limit stockouts, particularly on critical customers, products, components, and/or locations before they impact your time, money, and ultimately, your customers' satisfaction. Better information and insight into what is taking place within your Service Supply Chain will prevent these situations from having worsening effects.

Take a closer look at what a stockout is, what can cause them, and the actions you can take to prevent them from getting in the way of streamlined Service Supply Chain operations.

WHAT IS A STOCKOUT?

In its most simple terms, a stockout is having a demand that you can't fulfill because of a lack of inventory available to meet the need. In terms of how we, here at Baxter Planning think of a stockout, and in the context of a service organization, a stockout is having a demand for a certain part, but not having that part at the correct location to fulfill that specific demand. This distinction is important to make when considering what takes place behind the scenes to get a part where it needs to go before it affects customer satisfaction.

Stockouts happen at all stages of supply chain operations, during specific times of the year like holidays, and for both planned and unplanned reasons.

Whether or not you've encountered a stockout (and we're guessing you have), it's valuable to understand what causes them and how to prevent them from happening in the first place.

COMMON CAUSES OF STOCKOUTS

Stockouts occur for a number of planned and unplanned reasons. Understanding the difference between these two types of causes and the root problems that prompt stockouts will help you take the necessary preventative measures to correct them before they lead to customer dissatisfaction.

Planned stockouts are when there is a known stockout risk associated with a plan or process. Planned stockouts could occur for financial and budget reasons or are factored in as a necessary risk to a plan.

But, what about unplanned stockouts? This type of stockout is prompted by an unforeseeable issue that takes place. With these types of stockouts, you have to consider what could have been avoided and what preventative actions could have been done to prevent a problem that you can't plan for.

There are, in general, three categories of unplanned stockouts; data issues, configuration issues, and alignment issues, which we will expand on below. Let's take a look at some common planned and unplanned causes of stockouts.

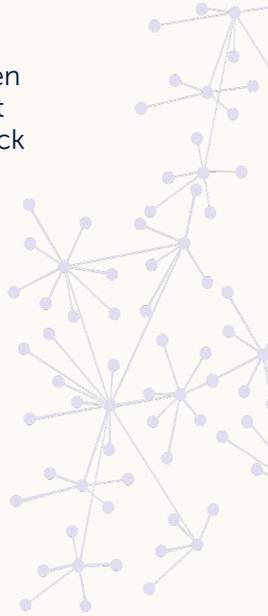


Planned Stockout:

Breakdown in the Planning Process

Your customers expect parts to be at the right location at the right time. If this doesn't happen it can cause significant operational time delays. If a technician goes to fix a mission-critical product with a part, and the part is not available and they are on a time-limited contract, it's crucial to have this information beforehand so corrective actions can take place. Having to expedite the needed part from another stocking location at the last minute gives way to serious additional costs and even then, sometimes the service level agreement (SLA) is not met and the customer is not happy.

When you go a level deeper than just not having a part at a certain location, you can start to uncover breaks in the planning process. It's impossible to stock every part at every location. Even when a legitimate plan is in place, oftentimes a decision will be made not to stock a certain part due to cost or space. When considering cost-effectiveness, it's also financially untenable to stock all parts in every location where they could be needed. But, there has to be a balance and with these decisions will come customer demand which falls in the stockout percentile. When the decision to not stock a part at a location is the cause of a stockout, that is a planned stockout.



Unplanned Stockout:

Data Issues

An unplanned stockout that has to do with data issues means that the data being used is bad, incomplete, or not clean. This could include data that does not contain all installed base or service contract information, incomplete or inaccurate product and FRU bills of material, incomplete or inaccurate historical demand data, and inaccurate on-hand balances. Basing operations and inventory needs on bad or incomplete data can lead to unplanned stockouts that take time and money to resolve.

Unplanned Stockout:

Configuration Issues

These issues would have to do with the planning system you are using. They can occur if you've implemented a planning software or even if you just have a manual planning process in place using spreadsheets. Your business changes over time and if your planning process doesn't or can't change to follow the evolution of your business you will wind up with issues. These issues encompass the whole configuration process, from updates to whatever procedure you're using to do your planning. If it doesn't keep up with your business changes you are going to have missed SLAs and additional costs.

Unplanned Stockout:

Execution Issues

This is when your planning process is out of alignment with your execution process. There are two pieces to getting the customer up and running that need to be aligned for a successful operation. The first is that you have to have the right part in the right place, and the next is that oftentimes you need a technician or somebody to install the part and facilitate the fix. Oftentimes, there are situations where the way a company dispatches technicians is out of alignment with how inventory is being planned and stocked within the truck stock areas. When a service call comes in for a 'next-day' customer, and a technician, customer service manager (CSM), dispatch, or someone else decides to go outside the process and utilize local inventory to facilitate a 'same-day' repair, the next call you receive could be for a 'same-day' customer that needs that part. Now, you don't have it locally because a customer that was not 'qualified' for it from a service contract standpoint got it. This causes a stockout situation where parts need to get expedited because the execution of the service call was out of alignment with the way you planned for that execution to occur.

When you work in a high-availability environment, have same-day commitments, or have critical and expensive downtime costs, inventory must be available within the allotted time frame and all of these situations must be considered. With visibility into this process and the right forecasting tools, smarter preventative measures can happen sooner to prevent any customer dissatisfaction.

The Cost of Stockouts

There are multiple challenges and problems that arise from stockouts. The most immediate problem that must be solved is servicing your customers, and you can't do that with a blind eye toward your own costs. When you don't have the right part at the right place you'll need to do whatever it takes to satisfy the service contract or SLA. This means that you may have to expedite the material from another location, incurring courier charges, send materials next flight out, or send a technician to meet up with another technician that has the material for a handoff.

Another key concern of this is technician return trips. If a technician goes on a service call but cannot close the call because a part is not available, the technician will have to leave, potentially causing a disgruntled customer. The technician then must spend additional time and resources to go back and fix the customer's issue when the part is available. Although the outcomes may be different, they all lead back to one thing: extra cost. You either have extra costs because you have to break your normal process to expedite a part or are using additional resources to correct the problem.

Upset customers are directly related to additional costs as well. This could be a penalty cost in a service contract or even future sales that are now on the line because your client doesn't feel like you're reliable. Let's take this a step further and consider the potential human cost as well. When parts are unavailable, real lives are affected when mission-critical machines are not up and running as planned. A broken MRI machine means appointments need to shift or in worse cases may lead to a delayed diagnosis, an out-of-service airplane means people miss meetings or can't see loved ones, and a down elevator can affect someone's ability to get to their office or home. In the end, everything comes back to cost. It's going to cost you extra money to deliver service, you could potentially lose a current customer, and you could even lose future sales.

① The Importance of Forecasting Within a Service Supply Chain

Organizations need an inventory plan that is going to meet their service level objectives and serve their customers in the way that they've committed to serving them, all without breaking the bank on inventory cost. If you're trying to reduce your inventory costs, which are likely a significant investment for your company, it's key to reduce inventory that is not 'buying' you any service level, instead of trying to reduce your general inventory.

With improved forecasting, you can get much closer to your target stock levels. A forecast is a key input into a target stock level calculation, hence a good forecast would be good input, and a better forecast that considers more data points and information would be better input. Improved forecasting provides an accurate depiction of what parts are expected to be used at each location. With a good forecast, you're able to take in the right information and use it the right way to create a forecast is critical to gaining the most accurate view of your operations.

To get a good forecast, you can utilize:

- Installed base data on products in the field that you are planning for and supporting
- Service BOMs in the installed base planning process
- Technician-specific product training, current inventory, and/or a prior forecast

Companies fall within a spectrum of data that's available to them. Understanding where you land on this spectrum and the data that's available to you will help you build a process to prioritize certain data sets that can and should be improved so you can combat potential stockouts.



① How Improved Forecasting Prevents Stockouts

A forward-looking forecast is a critical input in calculating target stock levels. With accurate target stock levels (TSLs), you can actually get the service level that you want to provide to your customer. The better information you can put in, the better output you're going to get, and a forecast is a significant piece of this. If you have visibility into valuable data sets in the first place, you can forecast and determine TSLs up front. This allows your team to proactively move material to the correct locations via cheaper transportation methods vs. reacting to a stockout with more expedited and expensive transportation methods. The hidden costs that occur are the ones that have to do with the people you'll need to help correct the stockout issue. These are the resources that get pulled away from their day jobs to expedite material.

Forecasting has evolved in recent years as the methods used to prevent stockouts are getting better as well as the math used to make predictions. Automation, AI, machine learning, and life-curve data are all being used more to give a better, well-rounded forecast. This allows you to bring in more external factors into the calculation. Technological advancements like these allow companies to look at an entire history of a certain product they stock to drive a forecast.

Having the ability to use all of the most pertinent information will help you build a more informed and accurate forecast. If you're only looking at historical data, or if this is the only information you have access to, then that's the best forecast you will get. For an optimal forecast, it's important to understand why collecting these other data elements is necessary for a full-scope view. The other piece to this is having software that has the ability to use this information to create your forecast. The more information and data you're able to collect the better your forecast will be.



The Baxter Planning Difference

BAXTERPROPHET

BaxterProphet, part of the BaxterPredict platform has the ability to utilize installed base information as a leading indicator for a more informed forecast. Our innovative software uses data inputs like history of installed base, product, geographic, and demand history to calculate and output a historical failure rate. This provides crucial visibility that comes down to target stock levels for part numbers associated with products that have service contracts written against them.

With this information, you can predict which part numbers are going to get used per installation for the products.

Not only does BaxterProphet allow you to see the product that's installed, but it also allows you to know where it is installed.

Knowing the location of a product is critically important to creating a better forecast that focuses on precise geographical areas. With information on where the installed base is, and where demand has historically occurred, you're able to have a detailed and full forecast.

Through this collection and analysis of information, you're able to see when a new installed base arrives at a location, and forecast for that new installed base without having to wait for that specific installed base to generate any demand of its own.

This is especially valuable to know when stocking new locations.

With this information, you can now stock parts knowing beforehand the inventory quantity to stock. If you don't have this information you'll have to wait until you see some demand and collect some historical data to build a forecast. But, with that demand also comes a customer with a need, and without the information already provided, you may not be stocked to meet that need in the first place.

Having the ability to map this information correctly, in conjunction with all historical data allows you to use it as a leading indicator so you can prevent a lag in stock.



Prevent Stockouts with Baxter Planning

In Service Parts Management, you don't know what's going to break, when it's going to break, or where it's going to break. It's extremely challenging to plan for these types of events, but with the leading, purpose-built technology, you can automate processes and make the best predictions possible. Without leading indicators and installed base data, you are only relying on demand history. Trying to make decisions based on spotty data won't net you the best results.

BaxterPredict's planning capability can analyze your most important information to form the best forecast so you can keep customers happy without overstocking and having excess inventory.

By focusing on planning, the customer satisfaction piece takes care of itself. The main difference is taking that extra step to dig a little deeper into the information available to explore where, when, and why stockouts are taking place. Visibility into this process allows you to reduce additional costs and ensure parts are where they need to be.

For more information on how Baxter Planning can help you prevent stockouts and improve your forecasting, set up a time to speak with our experts.

WHY BAXTER PLANNING?



Practitioner Expertise

Decades solving real-world Service Supply Chain problems



Purpose-Built Technology

End-to-end platform embedded with specialized AI and Data Core



Industry-Leading Outcomes

Combination of technology and partnership yield accelerated results

ABOUT BAXTER PLANNING

Baxter Planning is a global leader in Service Supply Chain software, delivering a Service Experience Advantage to the world's most innovative enterprises for over 30 years. The end-to-end BaxterPredict platform empowers organizations to optimize service parts planning, execution, and resolution, driving superior customer experiences, fostering long-term loyalty, and fueling business growth.

By combining purpose-built technology, award-winning AI, decades of practitioner expertise, and a commitment to true partnership, Baxter Planning consistently delivers industry-leading outcomes for its clients.

The company is headquartered in Austin, Texas, United States, with offices around the globe.

For more information, visit www.baxterplanning.com.

